

Calendar

Wednesday, August 23

11:00 a.m. Fermilab ILC R&D meeting - 1 West

Speaker: M. Demarteau, Fermilab

Title: ILC Detector R&D in the Americas

3:30 p.m. DIRECTOR'S COFFEE

BREAK 2nd Flr X-Over

THERE WILL BE NO FERMILAB COLLOQUIUM THIS WEEK

Thursday, August 24

2:30 p.m. Theoretical Physics Seminar - Curia II

Speaker: A. Lazopoulos, University of Nijmegen

Title: BCFW Recursion Relations for Gluon Amplitudes and the Link to Feynman Graphs

3:30 p.m. DIRECTOR'S COFFEE

BREAK - 2nd Flr X-Over

THERE WILL BE NO ACCELERATOR PHYSICS AND TECHNOLOGY SEMINAR TODAY

[Click here](#) for a full calendar with links to additional information.

Weather



Chance of Showers **85%/65°**

[Extended Forecast](#)

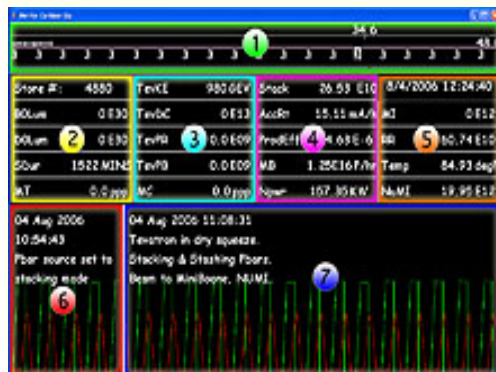
[Weather at Fermilab](#)

Current Security Status

[Secon Level 3](#)

Wilson Hall Cafe

The *Fermilab Today* guide to the Channel 13 monitor



TV monitors across the site allow employees to see how the Fermilab accelerator complex is doing at any given time. (Click image for a better view of the numbers that correspond to items in the list below.)

On channel 13, the Tevatron and its high-energy physics buddies are the celebrities. Displaying a computer program called "Notify," TV monitors across Fermilab show important information about experiments around the lab. But without clear explanation, the numbers on the screen can be confusing. To help boil down the information, *Fermilab Today* interviewed Wally Kissel of the Accelerator Division. The numbers below correspond with numbered areas in the screen shot above.

1 - The line of numbers represents a "supercycle"--a rapid sequence of commands sent as a series of numbers to accelerator hardware. When a device hears its number, it begins a function such as antiproton stacking or sending particle beam to various experiments.

2 - The number of particle stores since the Tevatron began its second run is displayed as "Store." Below, "B0Lum"

From the Technical Division

A newcomer with a history

This week's column features Marc Ross, the new head of the Technical Division.

It was with pleasure that recently I accepted Director Pier Oddone's offer to lead the Technical Division. It is not often that a place like Fermilab reaches outside the fold to bring in a relative newcomer for a leadership role.



Marc Ross

But these are special times, and I'd like to reflect for a moment on my personal past, and what it could mean for "the way forward."

Though most of my career has been at SLAC, like many of my HEP colleagues I spent younger days here. As an undergraduate student, when the lab was new, I worked in the Meson Lab for a few years with the Northwestern University group under the expert guidance of Professor Bruno Gobbi. More recently, I came to the lab along with several SLAC colleagues to help with the operation of the Tevatron and Recycler.

It is widely recognized that High Energy Physics accelerator builders must come together to develop our future. That future includes the International Linear Collider. Independent of the ultimate placement of this machine, Fermilab will have an important place in the collaboration developing the ILC. I hope

Wednesday, August 23

-Creamy Mushroom Chicken Soup
 -Texas Style Meatloaf Sandwich
 -Chicken Wellington
 -Italian Sausage w/Peppers
 -Smoked Turkey Panini Pesto Mayo
 -Assorted Slice Pizza
 -Chicken Alfredo Fettucine

[Wilson Hall Cafe Menu](#)

Chez Leon**Wednesday, August 23**

-New Potato, Kielbasa and Gruyere Salad
 -Strawberry Shortcakes

Thursday, August 24

-Roasted Beet and Citrus Salad
 -Grilled Swordfish and Vegetable Kabobs
 -Lemon Scented Rice
 -Plum and Marzipan Strudel

[Cheat Leon Menu](#)

Call x4598 to make your reservation.

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and "D0Lum" show the luminosities of CDF and D0 detectors, respectively - the bigger, the better. "SDur" shows how long particles were last stored in the Tevatron and "MT" shows how many particles per pulse are sent to the Meson Test area.

3 - When particle beams circulate in the Tevatron, "TevKE" shows how much energy each beam would have in billions of electron volts. The next three figures give particle counts for the Tevatron - "TevDC" displays the total number, "TevPR" gives the proton count and "TevPB" shows the antiproton count. "MC," similar to "MT," shows how many particles per pulse are delivered to Meson Center.

4 - The third column deals mostly with antiprotons, also known as pbars. "Stack" shows how many are in the accumulator ring while "AccRT" and "ProdEff" respectively show the stacking rate and production efficiency of pbars. "MB" shows the rate of protons delivered from the Booster to the MiniBooNE project and "Npwr" shows the power rate of particles sent to NuMI.

5 - Beneath the current date and time, "MI" shows the intensity of the particle beam coursing through the Main Injector. "RR" below it displays the number of pbars stored in the Recycler Ring while "NuMI" shows the number of particles sent to the NuMI experiment. The most popular item on Channel 13, Kissel says, is the outside temperature shown as "Temp" in this column.

6 - This area shows automated messages about lab activity.

that, with the help of the Technical Division, and all of Fermilab, I can help to make this happen, and in fact make a small part of history repeat itself. First, that by again growing collaborative efforts between Fermilab and others, I can help create a technically excellent machine--just as creating the Tevatron offered technical excellence to an earlier generation. Then, after this new effort in accelerator-building, Fermilab will remain the place for young students to come and explore, and build the future.

Milestones

Four college grads and a killer whale: 35-year PPD veteran Wesley Smart has a son, Mat Smart, who wrote a rock musical that is currently playing in Chicago. Smart's musical, *Keep Ishmael*, is a take-off on Melville's *Moby Dick*. It chronicles the adventures of four recent college grads from Naperville as they "set sail" for a road trip in their Ford Pequod and eventually wind up on in the Pacific Ocean to hunt down killer whale Shamu. *Keep Ishmael* plays from August 18 through September 16 at the [Theater Building Chicago](#). Performances are on Thursdays, Fridays and Saturdays at 7:30 p.m. and on Sundays at 3:00 p.m.

Announcements

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7 - In this space, human-created messages summarize major activities currently underway. A graph of the Main Injector's bending magnet current is shown in red while the MI proton beam current is displayed in green.

An online, HTML-version of "Notify" can be found [here](#).

--Dave Mosher

SLAC dark matter discovery on television news



In this image, dark matter (blue) has become separated from luminous matter (red) in the bullet cluster. *Image courtesy of Chandra X-ray Observatory.*

A team of US scientists, including a group from the Stanford Linear Accelerator Center, reported direct evidence of dark matter Monday. You can watch television coverage from a California [news station here](#).

In the News

Science, August 21, 2006: Dark Matter Exposed?

A smoking bullet clinches the case for dark matter in galactic clusters, NASA announced today. The cluster of galaxies designated 1E0657-56, known as the "bullet cluster" for its picturesque bullet-shaped cloud of superhot gas, has provided astronomers with the best evidence yet that intergalactic space is filled with the same stuff that provides the gravity needed to hold the galaxies

Brown Bag Seminar on Avian Flu

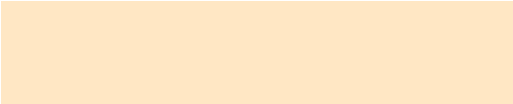
Wellness Works presents a Brown Bag Seminar on Avian Flu (Bird Flu) on Tuesday, August 29, from noon to 1 p.m. in 1 West. The seminar will be presented by Brian Svazas, director of Occupational Health for Fermilab. Learn facts vs. fiction, how to limit exposure, importance of hand washing and preparedness supplies.

International Folk Dancing

International Folk Dancing will meet Thursday, August 24, in Ramsey Auditorium in Wilson Hall. Dancing begins at 7:30 p.m. with teaching earlier in the evening and request dancing later on. Newcomers are welcome and you do not need to come with a partner. The group will return to Kuhn Barn beginning September 14. Info at 630-584-0825 or 630-840-8194 or folkdance@fnal.gov.

Be an IMSA Mentor

The Illinois Mathematics and Science Academy in Aurora is looking for physicists and engineers at Fermilab to mentor high school students. The mentor program begins on Wednesday, August 30, and concludes the end of April. Students will come to Fermilab and work with their mentors on Wednesdays, arriving by bus at 9:00 a.m. and leaving by 4:00 p.m. So far, two IMSA students have specifically requested Fermilab as a place they want to do a mentorship: One student hopes to work in the area of superconductivity and the other would like to work with particle detectors. If you are interested in mentoring, or if you have questions, send your name to Nancy Lanning at lanning@fnal.gov or x5588. You can find more information about the program on the [IMSA website](#).



together.
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